42. (New) The method of claim 7, wherein the recorded information indicative of said second client request is further a function of a cookie associated with said response.

43. (New) The system of claim 16, wherein at least some of the representation of said requests is further a function of one or more cookies associated with said responses. --

REMARKS

Following entry of the amendments herein, claims 4, 7-9, 15-16, and 37-41 will be pending in this application. Claims 1-3, 5-6, 10-14, and 17-20 have been cancelled. Claims 21-36 have been withdrawn from consideration by the Examiner. Claims 4, 7, 9, 15, and 16 have been amended. New claims 37-43 have been added.

Regarding the claim amendments, it should be noted that dependent claims 4, 7, and 9 have been amended to recite their subject matter in independent form (as well as to incorporate other minor changes as described below); dependent claim 15 has been amended to make it dependent on a non-cancelled claim; and independent claim 16 has been amended to include substantially the subject matter of cancelled dependent claim 19. Thus, the claim amendments do not introduce new matter, and are clearly supported by the original disclosure.

Moreover, new claims 37, 38, 40, and 41 recite substantially the same subject matter that was included in various originally-filed claims, and thus these claims do not introduce new matter. Additionally, claims 37-41 are supported by various portions of the specification. The following is a non-exhaustive list of the portions of the original disclosure that support the new claims:

- Claim 37: Figure 9, and page 18, lines 15-16.

- Claim 38: Figure 8, and page 12, lines 4-5.

- Claim 39: Figure 11 (element 1101).

- Claims 40 and 41: Figure 1 (element 22).

- Claims 42 and 43: Figure 10 (elements 1015 and 804).

The Office Action contains: (1) a restriction requirement, (2) objections to the drawings, (3) objections to claims 13 and 16, and (4) rejections of claims 1-20. Below, applicants address each of these matters in turn.

The Restriction Requirement (Office Action Paragraphs 1-3)

Applicants affirms that an election of claims 1-20 was made in a telephone conversation between applicants' attorney and the Examiner on or about October 10, 2002. Applicants agree that the telephone election should be treated as an election without traverse.

Based on the October 2002 telephone conversation, the Examiner has prepared an Interview Summary form, which requests that applicants provide a record of the substance of the Interview, so applicants summarize the substance of the discussion as follows: The Examiner initiated a telephone call to applicants' attorney to discuss claims 1-36. The Examiner asserted that claims 1-20 (Group I) and claims 21-36 (Group II) fall into different classes, and requested that applicants elect to prosecute either Group I or Group II. Applicants elected to prosecute Group I. Applicants believe that the foregoing is a complete and accurate record of the telephone conversation.

The Objections to the Drawings (Office Action Paragraphs 4-7)

The Office Action sets forth various objections to the drawings. Applicants' response to the drawing objections can be summarized as follows. Applicants have: (1) amended various portions of the specification to make the usage of reference numerals in the specification consistent with the drawings; and (2) proposed a correction to Figure 7B to remove an extraneous reference numeral. None of these amendments introduces new matter. Applicants have also provided remarks below that respond to the drawing objections paragraph by paragraph, and that explain how the various amendments address the objections to the drawings.

Additionally, applicants have provided a complete set of formal drawings in response to the draftsman's review of the originally-filed drawings, as set forth on the PTO-948 form. It appears from the PTO-948 form that the draftsman's sole objection was to the margins on Figures 1 and 4. (The PTO-948 form contains an extraneous handwritten mark near items 10 and 11, but it does not appear to applicants' attorney that the draftsman intended to object to the drawings based on items 10 or 11.) The corrected drawings incorporate the proposed change to Figure 7B in anticipation of the Examiner's approval of that change.

Applicants submit that the amendments, drawing corrections, and remarks below, are fully responsive to the drawing objections stated in paragraphs 4-7 of the Office Action, and on the PTO-948 form. If any minor issues remain with respect to the drawings, the Examiner is requested to contact applicants' attorney by telephone to resolve these issues.

Response to Paragraph 4:

With regard to the use of both reference numerals 28 and 50 to refer to floppy drives, applicants note that these reference numerals refer to two separate floppy drives, and thus the use

of two separate reference numerals is proper. As clearly shown in Figure 1, floppy drive 28 is connected to magnetic disk drive interface 33, while floppy drive 50 is connected to remote computer(s) 49. Since items 28 and 50 are separate parts of the drawing, the use of two different reference numerals is not only proper, but in fact is required under 37 C.F.R. § 1.84(p)(4). Thus, there is no basis for the Examiner to require a drawings amendment. While the Examiner has required applicants to submit a proposed drawing correction or a correct drawing, applicants believe that this paragraph is fully responsive to the drawing objection stated in paragraph 4 of the Office Action.

Response to Paragraph 5:

Applicants have amended the description of Figure 1 to include reference numerals 55, 56, and 62; has amended the description of Figure 5 to include reference numeral 160; has amended Figure 7B to remove the extraneous reference numeral 721; has amended the description of Figure 8 to include reference numeral 807; has amended the description of Figure 11 to include reference numeral 160; and has amended the description of Figure 12 to include reference numeral 1206. None of these amendments introduce new matter. The amendment to Figure 7B does not introduce new matter because the amendment merely removes an extraneous reference numeral. Moreover, the amendments to the specification do not introduce new matter because they merely address typographical oversights by making the specification conform to what is already shown in the drawings.

Response to Paragraph 6:

Regarding the objection to Figure 3, the absence of reference numeral 160 from Figure 3 is correct, and is not an error. Reference numeral 160 is introduced in Figure 2 and is mentioned

in the description of Figure 2 (see page 9, line 15). As explained in the specification, "Figure 3 shows an exemplary structure wherein a network, *such as* network 160, may be implemented ..." (emphasis added). Thus, Figure 3 shows an example that relates to element 160 in the manner described in the specification, but Figure 3 is not, in itself, intended to depict element 160. Thus, applicants request that the objection to Figure 3 be withdrawn.

Applicants have amended the description of Figure 5 to replace the reference to element 160a with a reference to element 160. Thus, the objection to Figure 5 has been rendered moot.

Applicants have amended the description of Figure 8 to address typographical oversights in the reference numerals used. The description of Figure 8, as amended, contains all of the reference numerals shown in Figure 8. Moreover, it should be noted that reference numeral 410a, which the Examiner has cited as being missing from Figure 8, is shown in Figure 9, and the specification has been amended to highlight this fact.

Applicants have amended the description of Figure 11 to refer to element 160 instead of 160a, which renders the objection to Figure 11 moot.

While the paragraph 6 of the Office Action requests corrected drawings in response to the objections, applicants believe that the foregoing remarks and amendments are fully responsive to the objections stated in paragraph 6 of the Office Action.

Response to Paragraph 7:

Applicants have amended the specification in the manner proposed by the Examiner to indicate that Internet options dialog box 600 is shown in Figure 6. Applicants have also amended the specification (in a slightly different manner than that proposed by the Examiner) to indicate that web page 410a is shown in Figure 9.

While paragraph 7 of the Office Action concludes by requesting that applicants submit

corrected drawings, the substance of paragraph 7 appears to call for applicants to amend the

specification rather than the drawings. Thus, applicants believe that amendment to the

specification, and the foregoing comments, are fully responsive to the objections set forth in

paragraph 7 of the Office Action.

The Objections to the Claim 13 and 16 (Office Action Paragraph 8)

The objection to claim 13 has been rendered moot by applicants' request to cancel claim

13.

Additionally, applicants have amended claim 16 to use the term "connectible" instead of

"couplable." The *American Heritage Dictionary of the English Language (4ᵗʰ ed. 2000)*, as

quoted on the web site www.dictionary.com, lists "connectible" as an adjective, so the

amendment responds to the stated grounds for objection. This amendment is made solely to

address the Examiner's objection as to the form of claim 16, and is not intended to change the

scope of claim 16, or to address any issue related to the statutory requirements of patentability.

The Rejection of Claims 1-20 (Office Action Paragraphs (9-15)

Claim 13 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1-3, 5-6, 10-11, and 14-20 have been rejected under 35 U.S.C. § 102(e) as being

anticipated by U.S. Patent No. 6,286,046 (Bryant).[1] Claims 4 and 7-8 have been rejected under

35 U.S.C. § 103(a) as being obvious over Bryant in view of U.S. Patent No. 5,881,269

(Dobbelstein). Claims 9 has been rejected under section 103(a) as being obvious over Bryant in

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[1] The Notice of References cited lists three separate Bryant patents. Two of these patents – Nos. 6,078,956 and 6,411,998 – are listed in paragraph 16 of the Office Action as not have been relied upon. Thus, applicants have assumed that the Bryant reference relied upon in the section 102 and 103 rejections is the third Bryant patent mentioned in the Notice of References cited – i.e., U.S. Patent No. 6,286,046.

view of Dobbelstein and in further view of U.S. Patent No. 6,446,028 (Wang). Claims 12 and 13 have been rejected under section 103(a) as being obvious over Bryant in view of U.S. Patent No. 6,233,600 (Salas).

As noted above, applicants have cancelled claims 1-3, 5-6, 10-14, and 17-20. Thus, the rejection of these claims has been rendered moot, and applicants will address only the patentability of the pending claims. Below, applicants address each of the grounds for rejection.

The Section 112, Second Paragraph Rejection

Regarding the rejection of claim 13 under section 112, section paragraph, this rejection has been rendered moot by applicants request to cancel claim 13.

The Section 102 Rejection

All of the claims rejected under section 102 have been cancelled, except for claims 15 and 16. Claim 15 has been amended to make it dependent on claim 4, which was not the subject of a section 102 rejection. Claim 16 has been amended to incorporate substantially the limitations of cancelled claim 19, which was not the subject of a section 102 rejection.

Thus, the rejection of claims 1-3, 5-6, 10-11, 14-20 under section 102 has been rendered moot. Since claims 15 and 16 now recite feature of claims that were rejected under section 103, applicants will address claims 15 and 16 with regard to the section 103 rejections below.

The Section 103 Rejections

Claim 4

Claim 4 recites the feature of "simulating a user interaction by retransmitting said client request." The Examiner asserts that Dobbelstein teaches this feature, and proposes to combine Dobbelstein with Bryant to yield the claimed invention. Applicants respectfully disagree with the Examiner's conclusion for the following reasons. First, Dobbelstein does not teach the above-quoted feature. Second, even if Dobbelstein were to teach this feature, there is no motivation to combine Dobbelstein with Bryant.

The portion of Dobbelstein cited by the Examiner (col. 7, ll. 18-27) indicates that successive client threads send an "SMB request" to a server. Essentially, the Examiner cites Dobbelstein for the proposition that the act of sending a request is prior art to the present application, and that it would be obvious to combine this prior art step with Bryant. Claim 4, however, does not merely recite the sending of a request. Rather, it recites simulating a user interaction by retransmitting "said request." Claim 4 clearly recites that "said request" is (1) a request that was already transmitted onto a network (i.e., in the "transmitting step"), and (2) was received from a client object to which a recipient of the request is coupled by way of a proxy server interface of the client. There is no legitimate argument that Dobbelstein teaches the *re-transmission* of a "request" that meets the features described above. Moreover, the Examiner has admitted that the step of "simulating a user interaction by retransmitting said client request" is not disclosed in Bryant (see Office Action, p. 8), and applicants agree that there is no such teaching in Bryant.

It should be noted that the Examiner has also cited the background section of

Dobbelstein, wherein it asserts that "[o]ne known solution for emulating a high number of client

workstations in a network is to write a software program which simulates the actions of a user in

the network." The fact that Dobbelstein mentions the word "simulate" in its description of the

prior art does not amount to a teaching of the features of claim 4. Dobbelstein's assertion that the

prior art discloses "simulating" does not constitute a teaching of the claimed technique of

simulating a user interaction by retransmitting a client request.

Additionally, it should be noted that the Examiner's explanation of why it would be

obvious to modify Bryant in accordance with the teachings of Dobbelstein is incorrect. The

Examiner asserts that it would be obvious to add "simulating a user" to Bryant's method

"because this would allow multiple threads to be created, each which [sic] act like a network

client and interacts with a server as a separate user." This explanation appears to be a non-

sequitur. Dobbelstein does not teach that simulating a user is a means for creating multiple

threads. On the contrary, Dobbelstein says that one can create multiple client threads to allow for

the simultaneous emulation of multiple users (see Dobbelstein, col. 2, ll. 4-10), but there is no

teaching that simulating a user creates multiple threads. Moreover, to the extent that Dobbelstein

uses multiple threads in order to emulate multiple users at the same time, Bryant contains no

suggestion that emulating multiple users simultaneously would be advantageous, so it is

impossible to conclude that Bryant contains any motivation to modify its teachings in accordance

with Dobbelstein.

Since the rejection of claim 4 is based entirely on an incorrect understanding of what

Dobbelstein teaches, and an inappropriate combination of Dobbelstein with Bryant, applicants

respectfully submit that the rejection of claim 4 under section 103(a) should be reconsidered and

withdrawn.

Claim 7

In rejecting claim 7, the Examiner appears to rely on the reasons stated in the rejection of

claim 5[2] (see Office Action, ¶ 11), but asserts that Dobbelstein teaches "a second client," and

thus finds that claim 7 is obvious over a combination of Bryant and Dobbelstein. Applicants

respectfully submit that the Examiner has overlooked what claim 7 actually says and that, upon a

closer inspection, claim 7 is patentable over Bryant and Dobbelstein.

First, it should be noted that claim 7 does not call for a "second client," but rather for a

"second client request." The claim has been amended to clarify that there are two "client

requests," one labeled "first," and the other labeled "second." (The claim language originally

included a "client request" and a "second client request"; the label "first" has been added to

distinguish the "first client request" from the "second client request," although this amendment is

made solely for reasons of form, and is not intended to affect the scope of claim 7.) Since the

claim language recites a "second client request" rather than a "second client," the Examiner's

assertion that Dobbelstein teaches a "second client" is irrelevant.

Second, claim 7 recites the act of "recording selected information indicative of said

second client request, wherein the recorded information indicative of said second client request is

a function of said response." Neither Bryant nor Dobbelstein teaches or suggests this feature, and

it should be noted that the Examiner has not even attempted to read Bryant and Dobbelstein onto

this feature. There is no teaching or suggestion in Bryant or Dobbelstein that recorded

information is a *function of a response to a first client request*. Thus, claim 7 is clearly patentable

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[2] Claim 7 was originally filed as being dependent upon claim 5, but has now been rewritten in independent form to recite all of the limitations of claim 5 (and of claim 1, on which claim 5 was dependent).

over Bryant and Dobbelstein.

Claim 9

Claim 9 calls for receiving two client requests and recording the time between these two requests. The Examiner acknowledges that Bryant and Dobbelstein do not teach this feature, but asserts that this feature is taught by Wang. Applicants disagree.

Wang teaches that requests and responses may be "timestamped." (See Wang, col. 2, ll. 6-29). Thus, a "server processing time" may be calculated "by subtracting the time when the server system receives the request packet from a client system from the time when the server system sends the first response back to the client system." (Col. 2, ll. 17-21). Additionally, a "network transit time" may be calculated "by subtracting said time when the server system receives a final acknowledgment packet from the time when said server system sent the first response packet to the client system." (Col. 2, ll. 21-25.)

Claim 9 does not recite calculating either of these time quantities. Rather, claim 9 recites calculating the time between two requests. Wang describes two different time calculations in great detail, and yet fails to teach or suggest the time calculation recited in claim 9. Given that Wang discusses various types of time calculations, but appears to explicitly omit the particular type of time calculation recited in claim 9, it cannot be said that Wang makes the claimed time calculation "obvious." Thus, Wang cannot be combined with Bryant and Dobbelstein to yield this claim feature.

Accordingly, claim 9 is patentable over Bryant, Dobbelstein, and Wang, and applicants request reconsideration and withdrawal of the rejection of claim 9.

Claims 8, 15, and 16

Claim 8 remains dependent on claim 7, and thus is patentable at least by reason of its dependency on claim 7. Additionally, it should be noted that the Examiner's attempt to read the claimed feature of a "relative location" onto Bryant is incorrect. The cited portion of Bryant (col. 7, ll. 66-67; col. 8, ll. 1-2, 7-16) describes "relative links." "Relative link" is a term of art which, as described by Bryant, means "a link that does not contain a Web server host name. ... they refer to other links on the same server." It is clear from this definition that the term "relative link" does not meet claim 8 feature of "the relative location of one of said hyperlinks on said web page." Bryant's "relative link" has nothing to do with the relative location of hyperlinks on a web page. These facts represent and additional reason why claim 8 is patentable over the proposed combination of Bryant and Dobbelstein.

Claim 15 has been changed to make it dependent on claim 4 instead of cancelled claim 1. Claim 15 is thus patentable at least by reason of its dependency on claim 4.

Claim 16 recites the limitation "wherein at least some of the representation of said requests is a function of said responses." This feature is not taught in the prior art of record, and thus claim 16 is patentable for reasons similar to those discussed above in connection with claim 7.

New Claims 37-41

New claims 37-41 are patentable over the prior art, for at least the following reasons:

Claim 37 is dependent on claim 16, and thus is patentable at least by reason of its dependency. Additionally, claim 37 recites a "function" that "takes into account the relative location of one of said hyperlinks on said web page," and thus claim 37 is also patentable for the reasons discussed above in connection with claim 8.

Claim 38 recites a "recorder object" that "calculates the time between a first of said requests and a second of said requests, and includes in said record a representation of the calculated time." Thus, claim 38 is patentable for reasons similar to those discussed above in connection with claim 9.

Claim 39 is dependent on claim 38, and thus is patentable at least by reason of its dependency. Additionally, claim 39 recites a "replayer object" that "inserts a duration of time between said first request and said second request based on the representation of the calculated time contained in said record." This feature is not taught in any of the art cited.

Claims 40 and 41 are dependent on claims 7 and 9 respectively, and thus are patentable at least by reason of their dependency.

CONCLUSION

For all of the foregoing reasons, applicants submit that all issues raised in the October 23, 2002 Office Action have been addressed, and that this case is now in a condition for allowance. Applicants thus request that the Examiner reconsider the Office Action and issue a Notice of Allowance.

Respectfully submitted,

Date: 2-24-03

Peter M. Ullman
Registration No. 43,963

Woodcock Washburn LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
Telephone: (215) 568-3100
Facsimile: (215) 568-3439

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Please replace the paragraph that begins at page 8, line 2, and ends at page 8, line 13, with the following replacement paragraph:

A number of program modules may be stored on the hard disk, magnetic disk 29, optical disk 31, ROM 24 or RAM 25, including an operating system 35, one or more application programs 36, other program modules 37, program data 38, a transaction recorder 71, and a transaction replayer 72. A user may enter commands and information into the personal computer 20 through input devices such as a keyboard 40 and pointing device 42. Other input devices (not shown) may include a microphone, joystick, game pad, satellite disk, scanner or the like. These and other input devices are often connected to the processing unit 21 through a serial port interface 46 that is coupled to the system bus, but may be connected by other interfaces, such as a parallel port, game port, universal serial bus (USB), or a 1394 high-speed serial port. <u>As another example, host adapter 55 may be connected to system bus 23, and host adapter 55 may, in turn, be connected to storage device 62 via Small Computer System Interface (SCSI) bus 56.</u> A monitor 47 or other type of display device is also connected to the system bus 23 via an interface, such as a video adapter 48. In addition to the monitor 47, personal computers typically include other peripheral output devices (not shown), such as speakers and printers.

Please replace the paragraph that begins at page 12, line 6, and ends at page 12, line 19, with the following replacement paragraph:

A transaction recorder in accordance with the present inventions is like a proxy server that serves as a bridge between web browser 180 and the Internet, relaying communications between the browser and the Internet while recording the communications. Figure 5 shows a proxy server 502 in use with web browser 180. Proxy server 502 may be a dedicated machine serving as a firewall or an ISP, or it may be a transaction recorder running on the same computer 20 as web browser 180. Web browser 180 is configured to direct all outgoing communications destined for the Internet [160a] 160, such as requests for web pages, to proxy server 502 through its proxy server interface 501. Web browser 180 is also configured to receive all incoming communications, such as retrieved web pages, from proxy server 502 through proxy server interface 501. When web browser 180 opens a connection to proxy server 502, the proxy server opens a corresponding connection to server 10a, which is part of the Internet [160a] 160. When web browser 180 sends a request for a web page to proxy server 502, the proxy server forwards the request to the Internet [160a] 160 via server 10a. When web browser 180 closes the connection to proxy server 502, the proxy server closes the corresponding connection to server 10a.

Please replace the paragraph that begins at page 12, line 20, and ends at page 13, line 11, with the following replacement paragraph:

In order to permit a user to configure web browser 180 for use with a

proxy server, such as the disclosed recorder, web browser 180 provides a series of

dialog boxes through which a user may instruct web browser 180 to use a proxy

server and may provide information identifying the location of the proxy server.

Web browser 180 has an Internet options dialog box 600 (see Figure 6), whereby

a user may configure various aspects of web browser 180. A user configures web

browser 180 through dialog box 600 by using an input device, such as keyboard

40 or mouse 42. One section of dialog box 600 is a connections section, which

the user can view by using mouse 42 to click on tab 601 in the example shown.

The connections section permits the user to configure various features of web

browser 180 pertaining to the connection between web browser 180 and the

Internet, such as the dial-up settings 603, and local area network settings 604.

The connections section includes a button 602 marked; by using mouse 42 to

click on button 602, the user is able to configure the local area network settings of

web browser 180, including the proxy server settings.

Please replace the paragraph that begins at page 16, line 16, and ends at page 17, line 5, with the following replacement paragraph:

Browser 180 sends a communication destined for the Internet 160a, such

as a request for a web page located at web site 803, to recorder object 71 over

connection 802 through proxy server interface 801. Recorder object 71 receives

the communication through client interface 808. Recorder object 71 relays the

communication to the Internet 160a over connection 806 through Internet

interface 809. While relaying the communication from web browser 180 to the

Internet, recorder object 71 creates a record 804 of the communication. The

record includes the URL of the web page requested by browser 180, and may also

include additional information such as: the duration of a communication, the sizes

of packets [707] 807 used in communications, the DNS resolution time of the

URL, and the time between various communication events. As described more

fully below, this information may be used in a transaction replayer to replicate

some aspects of the transaction.

Please replace the paragraph that begins at page 17, line 6, and ends at page 17, line 10, with the following replacement paragraph:

Recorder object 71 also receives communications from the Internet 160a

destined for browser 180, such as the content of a web page requested. Recorder

object 71 relays these communications to browser 160a, and may, optionally,

record information about these communications, such as the content of the

communication, the duration of the communication, and the time since the most

recent communication from client [401] 180 to the Internet.

Please replace the paragraph that begins at page 17, line 18, and ends at page 18, line 20, with the following replacement paragraph:

Recorder object 71 may also be associated with an analysis module 805,

which is a software module that may be a component of recorder object 71.

Analysis module 805 interprets communications between browser [401] 180 and

the Internet, and may modify the record to reflect its interpretation. One function

of analysis module 805 is to draw inferences about the context of some

communications from web browser 180, in order to permit a transaction replayer

(not shown) to simulate a user transaction more accurately. For example, one

communication from browser 180 may be a request to retrieve a web page 410a

located at a specified URL; web page [800] 410a is depicted in [Fig. 8] Figure 9.

Web page 410a may contain hyperlinks 411a-411c to other web pages identified

by their URLs 401a-401c. The user operating browser 180 may issue a command

to follow one of the hyperlinks, such as hyperlink 411b; this command will be

observed and recorded by recorder object [501] 71 (shown in Figure 8) only as a

request for a the web page located at URL 401b. Analysis module 805 compares

the URL 401b with the URLs referenced in the hyperlinks 411a-411c in web page

410a. Because URL 401b appears among hyperlinks 411a-411c, analysis module

805 concludes that browser 180 requested the web page at URL 401b as a result

of following hyperlink 411b on web page 410a. This information can be entered

in the record by recording the request for the web page at URL 401b as the

following of the second hyperlink on web page 410a; alternatively, the record

may initially contain the URL referenced in the followed hyperlink and can be

modified later by analysis module 805 to reflect the following of the second

hyperlink on web page 410a. The position of a hyperlink among all hyperlinks on

a web page is defined as the hyperlink's ordinal position; for example, in web

page 410a, the ordinal position of hyperlink 411a is first, of 411b is second, etc.

Recording the request for a web page as the following of a hyperlink permits a

transaction replayer making use of the record to simulate more accurately a user

Internet session, in which a user follows hyperlinks on web pages rather than merely requesting a series of unrelated web pages.

Please replace the paragraph that begins at page 20, line 13, and ends at page 21, line 2, with the following replacement paragraph:

Figure 11 depicts the use of a transaction replayer. Transaction replayer 1101 is an Internet client connected to the Internet [160a] 160 through connection 1102. Transaction replayer makes use of the record 804 created by the process depicted in Fig. 10, to replay a recorded transaction. For example, record 804 contains URLs requested during a browser session; transaction replayer 1101 can issue requests for those same URLs. Where analysis module 805 has been used to infer which URL requests were made as the result of a user following hyperlinks, and the ordinal position of the followed hyperlink has been recorded, transaction player 1101 can carry out an instruction to follow the n-th hyperlink by examining the previous web page received, determining the URL referenced by the n-th hyperlink, and requesting the web page located at that URL, where "n-th" denotes the ordinal position of the hyperlink to be followed.

Please replace the paragraph that begins at page 21, line 14, and ends at page 22, line 7, with the following replacement paragraph:

Figure 12 is a flowchart showing the processes by which the replayer simulates a user transaction by using the record 804 created by the transaction recorder. The replayer begins its main loop by starting at step 1201. At step 1202, the replayer makes a connection to an Internet server and initializes a

pointer to point to the first item in record 804. The items in record 804 include

URLs of web pages to be requested, and instructions to follow hyperlinks on prior

web pages. At step 1203, the replayer gets an item from record 804 by looking up

the item that is currently being addressed by the pointer; at the start of the

replayer session, the pointer addresses the first item. At step 1204, the replayer

evaluates whether the item is a request for a specific URL. If the item is a request

for a specific URL, then the replayer proceeds directly to step 1207 to process the

URL; if the item is an instruction to follow a hyperlink rather than a specific

URL, then the replayer looks up the hyperlink on the most recent web page (step

1206), which is stored in the log 1220 of the replayer session. Log 1220, which is

created during the replayer session and contains historical information about the

session, is discussed below. After determining the URL referenced in the

hyperlink to be followed, the replayer proceeds to the processing routine, which

begins at step 1207.

In the claims:

Please cancel claims 1-3, 5-6, 10-14, and 17-20, without prejudice or disclaimer of applicants' right to pursue the subject matter of the cancelled claims in an appropriate continuing application.

Please amend the claims as follows.

4. (Amended) [The method of claim 1, further comprising the act of] A method for recording network transactions, comprising the acts of:

coupling to a client object by way of a proxy server interface of said client object;

receiving, from said client object, a client request destined for said network;

recording selected information indicative of said client request;

transmitting said client request onto said network; and

simulating a user interaction by retransmitting said client request.

7. (Amended) [The method of claim 5, further] A method for recording network transactions, comprising the acts of:

coupling to a client object by way of a proxy server interface of said client object;

receiving a first client request destined for said network;

recording selected information indicative of said first client request;

transmitting said first client request onto said network;

receiving a response to said first client request from said network;

transmitting said response to said client object;

receiving a second client request destined for said network;

transmitting said second client request onto said network; and

recording selected information indicative of said second client request,

wherein the recorded information indicative of said second client request is a function of said

response.

9. (Amended) [The method of claim 1, further] A method for recording network

transactions, comprising the acts of:

coupling to a client object by way of a proxy server interface of said client

object;

receiving a first client request destined for said network;

recording selected information indicative of said first client request;

transmitting said first client request onto said network;

. receiving a second client request destined for said network;

transmitting said second client request onto said network; and

recording the time between the first and second client requests.

15. (Amended) A computer-readable medium containing computer-executable

instructions to perform the method of claim [1] 4.

16. (Amended) A system for recording network transactions, comprising:

a first interface [couplable] connectible to a client object, whereby said

interface receives requests destined for said network originating from said client object;

a recorder object in communication with said first interface for receiving

said requests by way of said first interface, and said recorder object creating a record comprising

a representation of said requests; and

a second interface [couplable] <u>connectible</u> to said network, said second

interface being in communication with said recorder object wherein said recorder object

transmits said requests to said network by way of said second interface,

<u>wherein said second interface receives responses destined for said client object originating from</u>

<u>said network, wherein said recorder object is in communication with said second interface for</u>

<u>receiving said responses by way of said second interface, wherein said first interface is in</u>

<u>communication with said recorder object whereby said recorder object transmits said responses</u>

<u>to said client object by way of said first interface, and wherein at least some of the representation</u>

<u>of said requests is a function of said responses.</u>